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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/525,751

09/22/2005

Akihiro Iimura

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38834

7590

09/30/2009

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EXAMINER

TSAI, TSUNG YIN

ART UNIT

PAPER NUMBER

2624

NOTIFICATION DATE

DELIVERY MODE

09/30/2009

ELECTRONIC

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

patentmail@whda.com

<b>Office Action Summary</b>	<b>Application No.</b> 10/525,751	<b>Applicant(s)</b> IIMURA ET AL.	
	<b>Examiner</b> TSUNG-YIN TSAI	<b>Art Unit</b> 2624	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 21 August 2009.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-4 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-4 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 25 February 2005 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)          | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____                                      |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)          | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____  | 6) <input type="checkbox"/> Other: _____                          |

## **DETAILED ACTION**

### ***Response to Arguments***

1. Applicant's arguments filed 8/21/2009 have been fully considered but they are not persuasive.

The prior reference does not teach how many processes are taken in order to complete the image processing.

Furthermore, the claim language neither require any number of processing times nor limited the amount of processing the method need to be perform. It also does not preclude the prior art from having more number of processing times.

### ***35 USC 102 – Claim Rejection***

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claims 3-4 are rejected under 35 U.S.C. 102(b) as being unpatentable over Kosuke et al (Patent abstracts of Japan 63-299400, IDS).

(1) Regarding claim 3, similarly claim 4:

Kosuke et al teaches the following subject matter:

- obtaining a position data of the fiducial mark 1 by image-processing the  
fiducial mark 1

**[Constitution discloses lead 3a and coordinates (X1, Y1) is seen as fiducial mark 1 and position data respectively];**

- rotating the holding member holding the object to be held substantially by 180 degrees in a horizontal plane

**[Purpose discloses mounting position (seen as holding member of IC); Constitution discloses rotation of nozzle by 180 degrees];**

- obtaining a position data of the fiducial mark 2 by image-processing the fiducial mark 2 rotated by 180 degrees

**[Constitution discloses lead 3b and coordinates (X2, Y2) is seen as fiducial mark 2 and position data respectively]; and**

- operating, on the basis of the position data of the fiducial mark 1 and the fiducial mark 2 rotated by 180 degrees, an amount of position shift from a rotational center of the holding member to a center of the object to be held and an amount of angle shift of the object in a horizontal plane with respect to a fiducial line of the holding member

**[Constitution discloses lead 3a and 3b and its position; Constitution discloses rotation 180 degrees; Purpose discloses correction of deviational amount; IC of rotation center with 180 degrees; coordinate X, Y are seen as**

**horizontal plane with (X1, Y1) and (X2, Y2) fiducial point on the same plane; mounting position is seen as holding member].**

***35 USC 103 – Claim Rejection***

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claim 1 is rejected under 35 U.S.C. 103(a) as being unpatentable over Kosuke et al (Patent abstracts of Japan 63-299400, IDS) in view of Webb et al (UK 0010489.3, IDS).

(1) Regarding claim 1:

Kosuke et al teaches the following subject matter:

- obtaining a position data of the fiducial mark 1 by image-processing the fiducial mark 1

**[Constitution discloses lead 3a and coordinates (X1, Y1) is seen as fiducial mark 1 and position data respectively];**

- rotating the holding member holding the object to be held substantially by 180 degrees in a horizontal plane

**[Purpose discloses mounting position (seen as holding member of IC); Constitution discloses rotation of nozzle by 180 degrees];**

- obtaining a position data of the fiducial mark 2 by image-processing the fiducial mark 2 rotated by 180 degrees

**[Constitution discloses lead 3b and coordinates (X2, Y2) is seen as fiducial mark 2 and position data respectively]; and**

- operating, on the basis of the position data of the fiducial mark 1 and the fiducial mark 2 rotated by 180 degrees, an amount of position shift from a rotational center of the holding member to a center of the object to be held and an amount of angle shift of the object in a horizontal plane with respect to a fiducial line of the holding member

**[Constitution discloses lead 3a and 3b and its position; Constitution discloses rotation 180 degrees; Purpose discloses correction of deviational amount; IC of rotation center with 180 degrees; coordinate X, Y are seen as horizontal plane with (X1, Y1) and (X2, Y2) fiducial point on the same plane; mounting position is seen as holding member].**

Kosuke et al does not teach the following:

- wherein the image device of the DNA micro-array preparing apparatus

Webb et al teaches the following:

- wherein the image device of the DNA micro-array preparing apparatus

**[Abstract discloses array with polynucleotide (or DNA) fluid droplets on substrate with target locations and dimensions].**

It would have been obvious to one skill in the art at the time of the invention to modify Kosuke et al teachings by Webb et al in order to improve the quality of produced arrays by indicating errors which may arise from vibrations, equipment malfunctions or other factors as disclose in the abstract by Webb et al.

(2) Regarding claim 2:

Webb et al further teaches:

- wherein the object to be held is a head of a DNA micro-array preparing apparatus for arranging a number of spots on a substrate

**[Abstract discloses array with polynucleotide (or DNA) fluid droplets on substrate with target locations and dimensions].**

### ***Conclusion***

5. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

- Magome et al (US 5,489,986) discloses position detecting apparatus.
- Nishi (US 5,243,195) discloses projection exposure apparatus having an off-axis alignment system and method of alignment therefore.

- Kocher (US 2003/0228697 A1) discloses micro-array calibration means.

6. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to TSUNG-YIN TSAI whose telephone number is (571)270-1671. The examiner can normally be reached on Monday - Friday 8 am - 5 pm ESP.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Samir Ahmed can be reached on (571)272-7413. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.



Art Unit: 2624

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Tsung-Yin Tsai/

Examiner, Art Unit 2624

September 23, 2009

/Samir A. Ahmed/

Supervisory Patent Examiner, Art Unit 2624